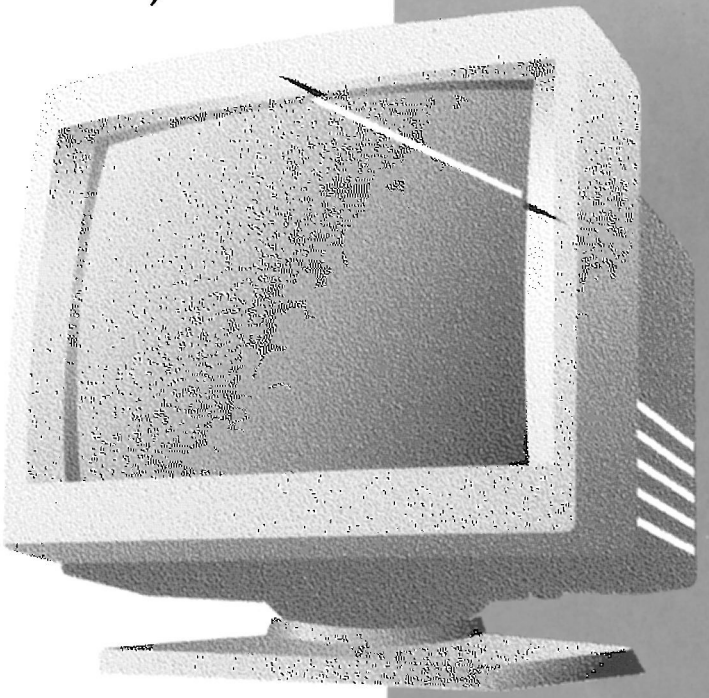
OPTIMUS

OPTIView 14L

14" Color Monitor
(13.2" viewable)



- USER'S GUIDE
- BENUTZERHANDBUCH

U.S.A.

U.S. FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT INFORMATION TO THE USER

NOTE : This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Connecting of peripherals requires the use of grounded shielded signal cables.

Standards and Recommendations

Safety and Radio Interference Approvals

This product is designed in conformity with the following standards or other normative documents :

Safety : EN 60950 / 1992 + A1, A2, A3
EMC : EN 55022 / 1994, EN 50082-1 / 1992
IEC 801-2 / 1991, IEC 801-3 / 1984, IEC 801-4 / 1988

to satisfy the basic requirements of Safety and EMC required by following Directives :

- EMC Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC & 93/68/EEC

Conformity with the above basic requirements is certified by means of the CE marking on the product.

Manufacturer's Disclaimer

All responsibility is declined :

- If the product is stored, transported, installed, modified, or used in a way that is different from that described in the documentation.
- If the product is used in conditions different from those described in the documentation.
- If any repair is carried out by unauthorized personnel.
- For any damage caused by normal wear and tear, uncontrollable events and/or connection to devices that are not original.

The manufacturer reserves the right to carry out modifications to the product described in this documentation at any time and without notice.

ENGLISH

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1. How to get the most enjoyment from this monitor

This is a 14" (13.2" viewable) color monitor to display signals from personal or micro computers.
This manual has been prepared to assist you in becoming familiar with your new display monitor.

Color display tube
Dot pitch 0.28mm

Notice

In order to prevent fire, shock hazards, do not expose this display to rain or moisture.

Features

- High resolution CRT for sharp and crisp images.
- 14" (13.2" viewable) Diagonal screen with non-glare direct etched surface.
- Unlimited Color Display.
- DPMS(Display Power Management Signaling).
- Digital Control.

DDC 1/2B (Option)

This monitor supports the VESA DDC standard(DDC 1/2B) for automatic display setup.

> ■ *CAUTION : If your video adaptor doesn't support fully VESA DDC 1/2B (based on Philips I^2C bus) specification, DDC 1/2B function does not work correctly.*

If this monitor is connected to a PC supporting the same standard, the PC automatically selects the connected display type for this monitor.
DDC 1/2B uses formerly unconnected signal pins in the 15-pin VGA connector. The system will perform "Plug & Play" feature if both monitor and host system support DDC 1/2B protocol.

General safety precautions

This monitor has been engineered and manufactured to assure your safety, and you can prevent your safety from serious electrical shock and other hazards by keeping in mind the following attentions.

- Do not place anything heavy, wet or magnetic on the monitor or the power cord.
- Be sure to turn the monitor off before plugging the power cord into the socket of power source.

- Make sure that the power cord and the other cords are securely and rightly connected.
- Avoid operating the monitor in the place extremely heated, humid or affected by dust.
- Never cover the ventilation openings with any material and never touch them with metallic or inflammable materials.
- Overloaded AC outlets and extention cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.
- Do not open monitor. There are no user serviceable components inside. There is dangerous high voltages inside, even when the power is off. Contact your dealer if the monitor is not operating properly.
- Do not use an aerosol directly on the picture tube because overspray may cause electrical shock.

Precautions for using the video monitor

As with any electrical equipment, careless use and unprofessional maintenance are able to cause serious electrical shock and other hazards. In the interests of safety, the following suggestions should be followed at all time.
This monitor includes an appropriated plug for your area.

Power source precautions

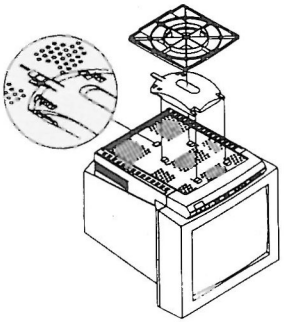
Never remove the backcover of the monitor.
This will expose you to very high voltages and other hazards. If the display monitor does not operate properly, remove the power cord from the wall outlet, and contact your dealer. As a safety feature, this monitor is equipped with a polarized, alternating current line plug.(Grounded,3 prong plug) This plug will fit into the outlet only one way. If you are unable to insert the plug fully into the outlet, or if the plug simply does not fit, contact an electrician to replace the obsolete outlet.
Do not defeat the safety purpose of this polarized plug.

WARNING : When positioning this equipment, please ensure that the main plug and the socket are easily accessible.

2. Tilt and swivel base installation

Fixing

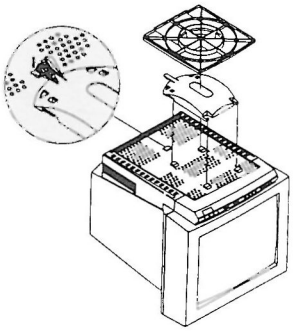
This product consists of the display monitor and the tilt and swivel. When fixing the tilt and swivel to the display monitor,please follow the steps below.



- Push the four hooks of the tilt and swivel into the four holes at the bottom of the display monitor.
- Then slide the tilt and swivel forward.
- Then the latch is going to come above the tilt and swivel base, and it is fixed firmly.

Removing

Please remove the tilt and swivel when transporting for repairing.

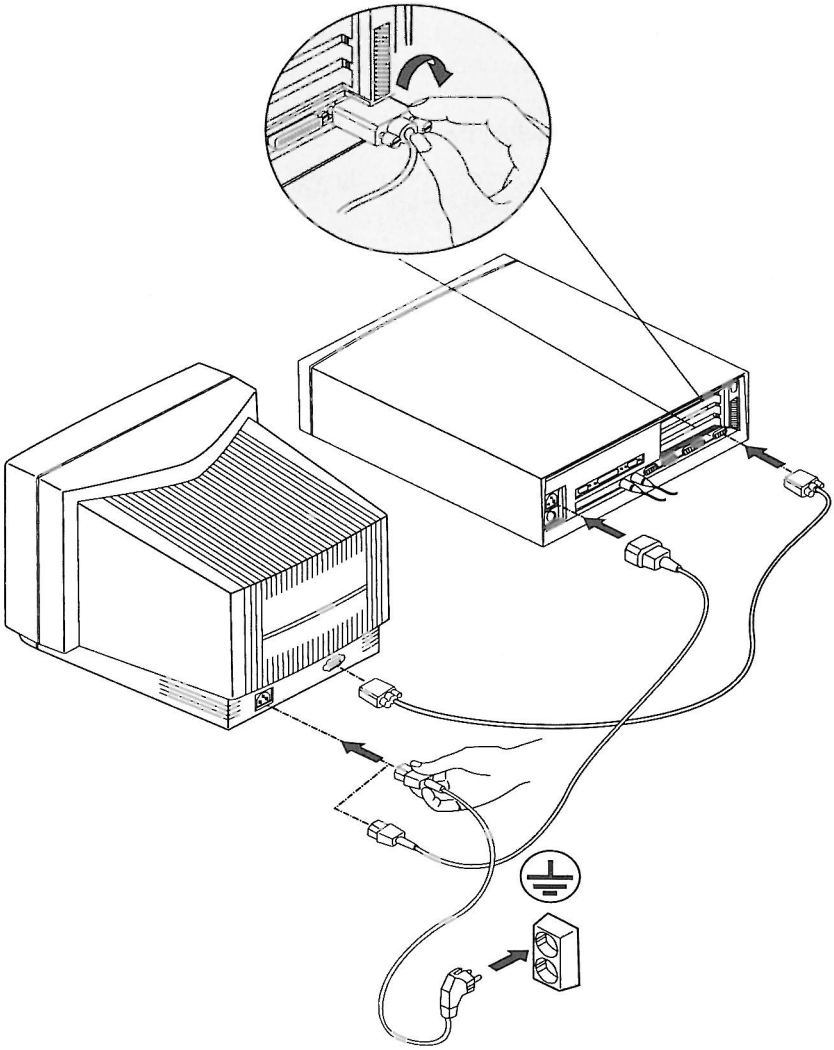


- Push down the latch of the display monitor and pull out the tilt and swivel.
- Slide backward the tilt and swivel from the front of the display monitor.
- Pull out the tilt and swivel from the holes of the display monitor.

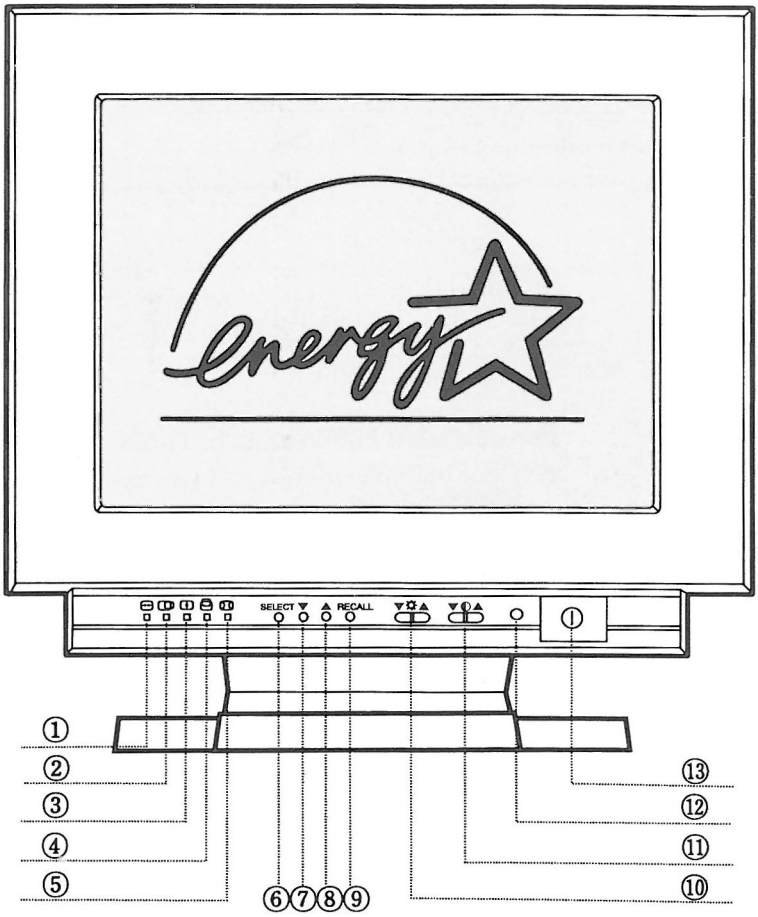
3. Connecting with external equipment

Cautions

Be sure to turn off the power of your computer before connecting the monitor.

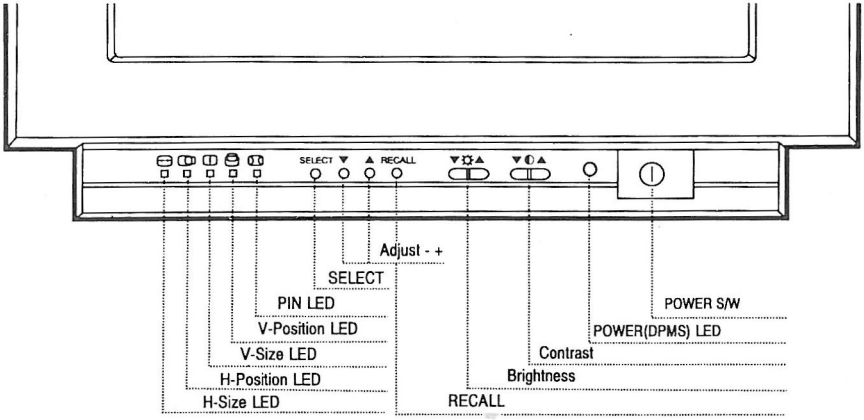


4. Control description



① H-Size LED
② H-Shift LED
③ V-Size LED
④ V-Shift LED
⑤ Pincushion LED
④+⑤ Trapezoid LED
⑥ Select
⑦ Adjust -
⑧ Adjust +
⑨ Recall
⑩ Brightness - +
⑪ Contrast - +
⑫ Power (DPMS) LED
⑬ Power Switch

5. External controls



H-Size LED : Press the select button until the H-Size LED is on.

A) Press button[(+)direction] to increase the horizontal size.
B) Press button[(-)direction] to decrease the horizontal size.

H-Position LED : Press the select button until the H-Position LED is on.

A) Press button[(+)direction] to adjust the screen to the right.
B) Press button[(-)direction] to adjust the screen to the left.

V-Size LED : Press the select button until the V-Size LED is on.

A) Press button[(+)direction] to increase the vertical size.
B) Press button[(-)direction] to decrease the vertical size.

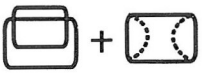
V-Position LED : Press the select button until the V-Position LED is on.

A) Press button[(+)direction] to adjust the screen to the top.
B) Press button[(-)direction] to adjust the screen to the bottom.

Pincushion LED : Press the select button until the Pin LED is on.

A) Press button[(+)direction] to bow out the vertical side line.
B) Press button[(-)direction] to bow in the vertical side line.

Trapezoid LED : Press the select button until the Trapezoid LED is on.



A) Press button[(+)direction] to make the image wider the bottom.
B) Press button[(-)direction] to make the image wider at the top.

RECALL : If you want to retrieve the factory presetting, press the recall button.

Brightness : The Brightness Control button adjusts the picture mood according to the brightness of the room.

A) Press button[(+)direction] to heighten the brightness level of the picture.
B) Press button[(-)direction] to lower the brightness level of the picture.

Contrast : The Contrast Control button adjusts the degree of difference between the lightest and the darkest sections on the screen.

A) Press button[(+)direction] to heighten the contrast level of the displayed image.
B) Press button[(-)direction] to lower the contrast level of the displayed image.

Function LED : **When control button is set to min or max.**

The function LED(■) is blinking

Out of range

When an unsuitable signal is detected, all the function LEDs are blinking.
Check your system or setup video mode again.

POWER LED : **Normal mode**

POWER LED is lit Green

DPMS mode

POWER LED is lit Orange/Green

Power Switch : Use to turn Monitor on or off.

6. Microcontroller features

The microcontroller automatically detects the video board installed in user system. When user turn on the monitor, the microcontroller first checks the display mode memory stored in the user setting area and the factory presetting area.

Display modes memory

The microcontroller has the memory capacity to store 17 different display modes including timing formats and display settings.This memory capacity is divided into two parts. One is the user setting area, the other is the factory presetting area.

- **User setting area**

  The user setting area maintains the recent 10 display modes set by the user in its memory. The user can add non-standard modes.
  If users adjust display image, the image is saved automatically.
  Then the microcontroller always detects and displays the last mode stored in the user setting area when the monitor is turned on.

☞ *Note*

If the timing input from the video card is not a factory preset mode, the screen may not be correctly displayed.
Please adjust external controls to get the correct screen.

- **Factory presetting area**

  There are 7 display modes stored in this area. These display modes are preset at the factory and include most of the display modes currently available (see TIMING CHART of this manual).
  User can also retrieve the factory preset mode by pressing the RECALL button.

- **Automatic save**

  The monitor automatically saves the new setting after 1 second inactivity.

7. Power management

This monitor is equipped with DPMS(Display Power Management Signaling) function which automatically leads the monitor to the state of power saving that consumes just a little power less than 8W, when the computer is left unattended.
Although the monitor can be left in power-saving mode for longer periods, we recommend that users turn it off after your daily work, because degaussing helps maintain faultless color purity.

Operation
The DPMS function requires support from the computer system or any software DPMS function applied, currently being used. If the keyboard(or mouse) is left unattended for a certain period, the program or system will set the sync signals to DPMS modes. The DPMS function has three states. The recommended signals, power consumption and recovery times are shown in the table below.

STATES	SIGNAL			POWER CONSUMPTION	RECOVERY TIME	LED INDICATOR
	H.S	V.S	VIDEO			
NORMAL	Pulses	Pulses	ACTIVE	70W (Typical)	-	GREEN
STAND-BY	No Pulse	Pulses	BLANK	50W	WITHIN 1 SEC	ORANGE/GREEN Blink about 2 sec
SUSPEND	Pulses	No Pulse	BLANK	LESS THAN 20W	WITHIN 3 SEC	ORANGE/GREEN Blink about 1 sec
OFF	No Pulse	No Pulse	BLANK	LESS THAN 8 W	WITHIN 15 SEC	ORANGE

☞ *Note*

When the monitor's signal cable is disconnected, the raster becomes visible. This is not a malfunction. The screen will normalize when the signal cable is connected again.

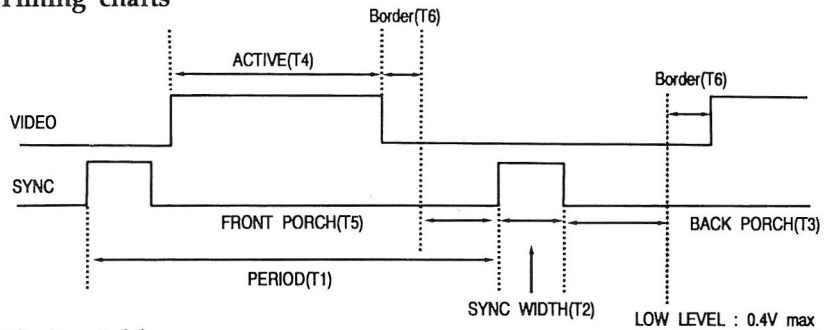
※ **Power consumption condition (Typical)**
Input Voltage : 220VAC
Input Frequency : 50Hz/60Hz
Display Pattern : cross hatch
Display Size : 255 mm (H) × 190 mm (V)

8. Preset timing chart

Supported Video timings

This monitor shall be capable of displaying following video timing charts.

- **Timing charts**



- **Timing table**

Horizontal	Dot	640	720	1024	640	800	800	1024
Frequency	kHz	31.469	31.469	35.524	37.500	37.879	46.875	48.363
Period (T1)	us	31.778	31.778	28.151	26.667	26.400	21.333	20.677
Sync Width (T2)	us	3.813	3.813	3.920	2.032	3.200	1.616	2.092
Back Porch (T3)	us	1.907	1.907	1.250	3.810	2.200	3.232	2.462
Data Area (T4)	us	25.422	25.422	22.800	20.317	20.000	16.162	15.754
Front Porch (T5)	us	0.636	0.636	0.180	0.508	1.000	0.323	0.369
Border (T6)	us	0	0	0	0	0	0	0
Vertical	Line	480	400	768	480	600	600	768
Frequency	Hz	59.950	70.080	87.000	75.000	60.317	75.000	60.004
Period (T1)	ms	16.683	14.269	11.500	13.333	16.579	13.333	16.666
Sync Width (T2)	ms	0.064	0.064	0.113	0.080	0.106	0.064	0.124
Back Porch (T3)	ms	1.048	1.080	0.563	0.427	0.607	0.448	0.600
Data Area (T4)	ms	15.253	12.711	10.810	12.800	15.840	12.800	15.880
Front Porch (T5)	ms	0.318	0.413	0.014	0.027	0.026	0.021	0.062
Border (T6)	ms	0	0	0	0	0	0	0
Dot Rate	MHz	25.175	28.322	44.900	31.500	40.000	49.500	65.000
Interlaced	Y/N	N	N	Y	N	N	N	N
Sync Polar	H	-	-	+	-	+	+	-
	V	-	+	+	-	+	+	-

☞ *Notice*

In order to attain the maximum resolution, it is necessary to equip the video card compatible with that resolution in your PC.

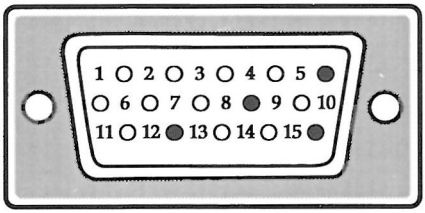
9. Video input terminal

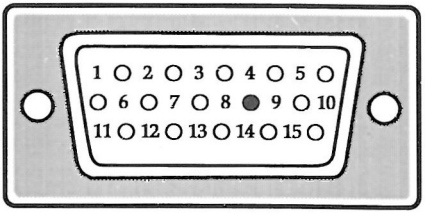
A 15 pin D-sub connector is used as the input signal connector.
Pin and input signals are shown in the table below.

Pin description

SIGNAL / PIN NO.	SEPERATE SYNC	DDC 1/2B (Option)
1	RED	RED
2	GREEN	GREEN
3	BLUE	BLUE
4	N.C	N.C
5	N.C	GROUND
6	RED GROUND	RED GROUND
7	GREEN GROUND	GREEN GROUND
8	BLUE GROUND	BLUE GROUND
9	N.C	N.C
10	LOGIC GROUND	LOGIC GROUND
11	GROUND	GROUND
12	N.C	SDA
13	H-SYNC	H-SYNC(TTL)
14	V-SYNC	V-SYNC(VCLK)
15	N.C	SCL

D-Sub miniature connector





10. Specifications

CRT	SIZE	14" (13.2" viewable)
	Dot Pitch	0.28 mm
	Type	Non-Glare, VLMF Type
Input	Signal	R.G.B Analog
	Connector	15 pin D-Type
SYNC	H-F	30~50 kHz(Automatic)
	V-F	50~130 Hz(Automatic)
Display	Area(H×V) Color	255×190mm (Max. Over Scan)
Resolution		Max 1024×768(48kHz/60Hz)
User Controls		Power Switch,Brightness,Contrast,H/V Size, H/V Position, Recall, Pincushion, Trapezoid
Power Management		As per VESA Standard, Lower than EPA's recommendation
Compatibility		VESA, 8514/A, XGA, EVGA
DDC(Option)		VESA DDC 1/2B
Power Source		100 - 240 VAC(Universal Power) 1.3A 70W (Typical)
Safety & Regulation	EMC	FCC, MPR II, CE
	Safety	UL, CSA, TÜV-GS, ISO-9241-3, DHHS, NEMKO, DEMKO, FIMKO, SEMKO, PCBC
Temperature	Operating	5 to 35 degree celsius
	Storage	-30 to 60 degree celsius
Humidity	Operating	35 % to 80 %(Non-condensing)
	Storage	30 % to 85 %
Acoustic Noise		Less than 70dB
Weight		Unit : 10.5Kg Carton : 12.5Kg
Dimension(W×H×Dmm)		352×360.2×372.5 mm

■ *Specification is subject to change without notice for performance improvement.*